

## ABSTRACT

A system for automatic gain control prevents input overload by precisely controlling the input level of a received, digitally modulated signal without using a variable gain amplifier. A limiting amplifier in conjunction with a logarithmic detector splits an input signal path in two, providing separate phase and amplitude information for downstream digital signal processing, where the separate phase and amplitude information is processed without variable gain artifacts. The separated phase information may further be divided into I and Q signals.

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